THE UNIVERSITY OF ARIZONA
MEDICAL CENTER

Overview of UAMC Trauma Program

Trauma Program Managers Workshop
July 30, 2013

Michelle Ziemba, RN MSN Director of Trauma and
Emergency Services

OVERVIEW OF TODAY'S ACTIVITIES

- Understand more about the Level I Trauma Center at UAMC – University Campus

- Appreciate the role Trauma Centers play in the Trauma System and how important the Performance Improvement processes are to improve the system of trauma care in our state

- Participate in a real M&M session to see first hand how care can be reviewed and discussed for the benefit of program development

- Learn fist hand through panel discussions ways in which performance improvement activities can be implemented in trauma centers

- Opportunity to network and exchange ideas with our peers and colleagues.

UAMC – UNIVERSITY CAMPUS LEVEL I TRAUMA CENTER

- UAMC was initially verified as a Level I Trauma Center by the ACS in November of 2008.
- Prior to that time, as many of Arizona's trauma centers, it was a self designated Level I trauma program
- We see about 4800 trauma patients each year with 2400 admits
- All surgical subspecialties exist on this campus.
- We are the only Level I trauma center serving all of Southern Arizona
- One of the busiest in the state
- Academic medical center for the University of Arizona College of Medicine
- We participate in the SAEMS region – Southern AZ EMS region.

UAMC TRAUMA DEPARTMENTS AND UNITS

- **Emergency Department** – 61 treatment spaces, 7 of them large trauma resuscitation bays. 18 bed Pediatric Emergency Department. In addition a 16 bed CDU observation unit.

- **2DW Surgical / Trauma ICU** – 20 bed surgical trauma ICU located directly above the ED

- **2DN** - Intermediate Care unit surgical unit for recovery of surgical and trauma patients adjacent to the ICU.

ROLE OF THE TRAUMA PROGRAM MANAGER

- Very unique and can be a pretty lonely job as it is often the only one in a facility
- Holding all people accountable to optimal trauma care for all our injured patients
  - Nurses
  - Physicians
  - EMS Providers
  - Departmental Leadership
- Must be an expert in PI processes.   Eventually you will be sought after by others in your organization to help them improve other systems of care
- Trauma center operations and systems stress hospital operations. Trauma is a time sensitive disease that requires availability and consistency. If you do trauma well your organization can do many other things well.
- Master at using data to drive improvements and changes
- We need each other to support our efforts and initiatives.

PERFORMANCE IMPROVEMENT DRIVES YOUR PROGRAM!!

- **Right Patients**
  - AZSTR – definition of the trauma patient
  - Field Triage Criteria (State, CDC, regional)
- **Right Place**
  - Level of Trauma Center
  - Level of patient care in your hospital
- **Right amount of time**
  - Scene times
  - ED Dwell times
  - Time to next phase of care
- **Right thing for the patient**
  - Outcome measures
  - Mortality
  - Complications

PERFORMANCE IMPROVEMENT PROCESS

- Define and know your indicators / standards of care delivery

- How will you measure it?   Must be able to track, audit, and or measure compliance for that indicator

- Define and implement your processes for review. Operational committees, special task forces, and or Case Review

- LOOP CLOSURE.   Define how you will take action to fix and or correct any issues you find to improve the care to trauma patients.

ACT

PLAN

STUDY

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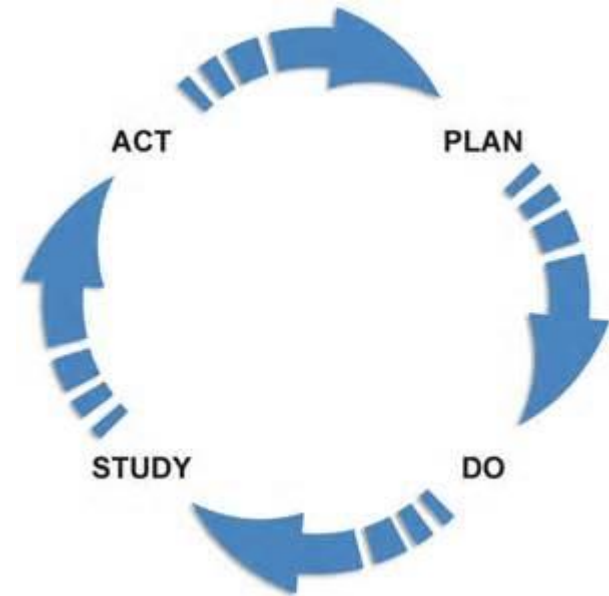
PERFORMANCE IMPROVEMENT

Trauma Centers

- Program operations
- Facility specific performance as it relates to the care of the patient in your facility
- Timing to transitions of care
- Complications
- Outcomes
- Performance competency of trauma staff

Trauma System

- System operations through various systems of care
  - EMS
  - Trauma Centers Level IV, III, II, I
- Field triage and transport
- ED dwell time timing of transitions
- Mortality
- Injury prevention
- Legislative initiatives
- Mass casualty management

Trauma M&M Unraveled

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First Level Review

Purpose: Issue Identification / Validation

Phase of Care

ID of Issues

Prehospital

- Concurrent review: TR, PHC, TNP, TDQ, TPM, TPD, TMD
- Concurrent data entry: Trauma Registry other IS applications
- Case summary initiated: review current admissions, issue determination, discussion, delineation, decisions, do/actions
- Conversations, written correspondence

Second Level Review

Purpose: Determine what goes to committee, review complex inpatient cases and systems issues. Program oversight and communications. Completed by TDQ, TPM and or TMD. Weekly Trauma M&M

Legend

TR – Trauma Registry

PHC – Prehospital Coordinator

TNP – Trauma Nurse Practitioner

Third Level of Review

Purpose: Peer review /accountability determination loop closure plan, trended data review. Review of trauma program system activities.

Trauma Operations Committee (Trauma CPI)

Trauma Multidisciplinary Peer Review Committee

Actions

| Educational Session | Staff Follow Up Corrective Action | Trend Monitor Report | Guideline / Policy Development | Hospital / Systems Project |

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FIRST LEVEL REVIEW

- Initial review of care

- Review of care against established audit filters or PI Indicators

- If something is triggered in that review does it need to go further?

  - Impact patient outcome

  - Triggered review or audit but situation was handled appropriately best for the patient

  - Issues is being tracked and trended

- Determination if the issue needs to go for a next level of review for case review or significant operational system issue.

SECOND LEVEL OF REVIEW

- Review between TPM and TMD for review of the situation and at that time can implement immediate action and or loop closure.

- Review as M&M Trauma service level meeting or an Emergency Department case review conference.

- Issue taken up to a hospital organizational performance improvement or quality meeting this system issue not only impacts the trauma patient, but this very same issue impacts other populations as well.

- Can the issue be resolved and or loop closure be established at this level?

- Action plans developed

THIRD LEVEL OF REVIEW

- Cases meeting hard line audit filters that all patients meeting this criteria have this level of review
    - Deaths
    - ICU bounce backs
    - Patients not transitioning for the next phase of care in timely fashion
    - Missed injuries
    - Returns to OR
    - Involvement of multiple sub-specialities (issues across departments)
- Multidisciplinary Trauma Peer Review
- Trauma Operations
    - Performance on larger system issues
    - Dashboards tracking issue resolution and program performance
    - Monitoring of previous PI issues
    - Overall program performance and development

UAMC - Trauma Systems Performance Indicators - FY2012-2013

Department Responsible for Supplying Data	Responsible Party for Resolution/ Threshold	Indicator	Threshold	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13
		Emergency Department Indicators														
Trauma Registry-Monthly	ED RN Manager	Documentation of total intake for all Red Trauma Team Activation Patients (Rate based, # of Red trauma activations is the denominator, # of trauma activations with total intake documented numerator)	95%	100%	100%	100%	97%	94%	100%	97%	98%	100%	97%	100%	97%	100%
Trauma Registry-Monthly	ED RN Manager	Documentation of total output for all Red Trauma Team Activation Patients (Rate based, # of Red trauma activations is the denominator, # of trauma activations with total output numerator)	95%	100%	98%	99%	97%	95%	100%	96%	98%	100%	95%	100%	97%	100%
Trauma Registry-Monthly	Trauma MD's	Presence of Attending Trauma Surgeon at Red Trauma Team Activations. (Percentage of time the attending surgeon is present within 15 minutes of patient arrival time for all red trauma activations.)	95%	96%	95%	89%	90%	85%	96%	94%	84%	90%	94%	89%	90%	76%
		Inpatient Care Indicators														
Trauma Services	Trauma Services	Patient Satisfaction: MD percentile ranking for D2N patient care unit.	Press Ganey Survey 20th percentile													
D2N	Trauma Surgeons	Physician communication: Rate based on HCAHPS Report.	HCAHPS Achievement Threshold 79.6	73*			69			64 (Jul-Dec)			63 (Jul-Mar)			
ICU	ICU Manager	Central line infections.	NHSN 50th percentile = 3.0	1.9			1.0			1.2			0.0			
ICU	ICU Manager	Ventilator Associated Events. (Rate of VAE's. Number of VAE's divided by vent days multiplied by 1000)	NHSN 50th percentile = 5.2	1.7			7.8			7.3			9.7			
ICU	ICU Manager	CAUTIs. Rate of catheter associated urinary tract infections.	NHSN THD=3.2	2.5	5.7	2.5	4.8	2.4	10.5	2.9	5.7	5.9	4.7	2.9	0.0	
D2N	D2N Staff	CAUTIs. Rate of catheter associated urinary tract infections.	NHSN THD=1.1	0.0	0.0	0.0	0.0	0.0	10.5	9.1	0.0	0.0	0.0	0.0	0.0	
Trauma Services	D2N Staff	Alcohol Screening Percentage of completed alcohol screenings on all D2N trauma patients > 18 years of age.	90%	80.2%	70.3%	75.3%	89.9%	77.2%	71.6%	82.4%	77.1%	73.7%	91%	90%	90%	89%
Trauma Services	D2N Staff/Social work	Alcohol Brief Intervention Percentage of documented brief interventions performed on all D2N trauma patients > 18 years of age meeting criteria.	90%	70.0%	18.8%	26.3%	63.6%	50.0%	40.0%	66.7%	60.0%	45.5%	33%	43%	43%	45%
Trauma Services	Social Work	Alcohol Referral to Treatment Percentage of documented referral to treatments performed on all D2N trauma patients > 18 years of age meeting criteria.	90%	90.0%	40.0%	100.0%	70.0%	66.7%	81.8%	87.5%	76.9%	44.4%	55%	42%	53%	64%
Trauma Services	Trauma MD's/Radiology	Percentage of Graded Spleens Documentation of grade of spleen injury in radiology report or discharge dictation.	90%	57.1%	66.7%	50.0%	66.7%	100.0%	100.0%	83%	100.0%	100.0%	92.3%	100.0%	90.0%	75.0%
Trauma Services	Trauma MD's/Radiology	Percentage of Graded Livers Documentation of grade of liver injury in radiology report or discharge dictation.	90%	100.0%	75.0%	25.0%	100.0%	50.0%	100.0%	100.0%	100.0%	100.0%	100.0%	83.3%	100.0%	100.0%
		AIS ISS Mortality Rate														
Trauma Registry-Monthly	Trauma Services	AIS ISS 1-8	(NTDB 0.85)	0.35	0	0.37	0	0	0	0.00	0.36	0	0	0	0.38	0
		AIS ISS 9-15	(NTDB 2.37)	0.00	0	1.98	0	2.08	2.15	0.00	1.23	1.41	0	0	0	0
		AIS ISS 16-24	(NTDB 6.59)	3.85	5.56	10.34	4.17	7.41	0	8.33	3.33	0	7.14	5.26	0	4
		AIS ISS >or ≥ 25	(NTDB 30.16)	23.08	37.5	46.15	33.33	33.33	38.89	15.79	33.33	30.43	31.03	25	33.33	21.05
		AIS ISS Median LOS Days	MEDIAN													
		AIS ISS 1-8	(NTDB 2.8)	0.25	0.27	0.29	0.51	0.32	0.34	0.3	0.33	0.31	0.29	0.38	0.33	0.58
		AIS ISS 9-15	(NTDB 5.0)	2.77	2.35	2.29	2.51	2.51	2.51	2.51	2.57	2.51	2.51	2.51	2.51	2.94

LOOP CLOSURE

- Educational session

- Individual staff follow up or corrective action

- Trending and or monitoring report (monthly or quarterly) dashboards to demonstrate improvement and or progress

- Guideline / Policy development and or revision

- Hospital or organizational project or task force